

Integrated Water Resource Management- Watershed Planning

David Christensen
*Washington Department
of Ecology*

May 1, 2015

© STEVE G. BING

Overview for this morning's talk

- Ecology's dual mission
- Instream flow science
- The Watershed Planning Act
- Watershed planning successes
- Challenges
- Going Forward

Mission

Department of Ecology's Water Resources Program

Managing water resources to
meet the current and future needs
of the natural environment and
Washington's communities



Let's go back almost 45 years – 1971

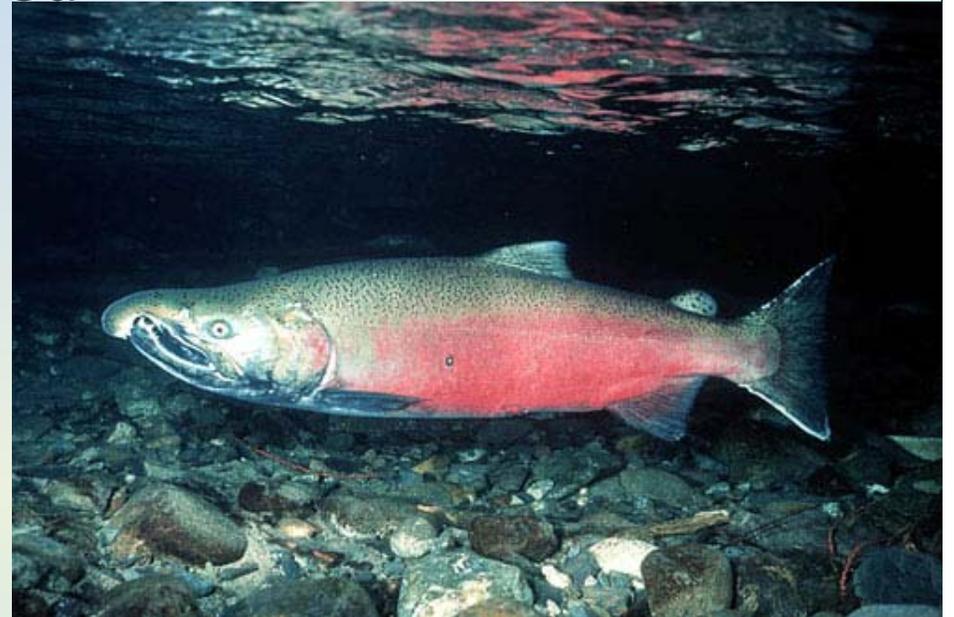
Legislature adopted The Water Resources Act

...to insure that waters of the state are protected and fully utilized for the greatest benefit of the people of the state of Washington...base flows necessary to provide for preservation of wildlife, fish, scenic, aesthetic and other environmental values, and navigational values be retained in rivers and streams of the state, and that lakes and ponds shall be retained substantially in their natural condition

Water Resources Act of 1971

RCW 90.54.020 General declaration of fundamentals for utilization and management of waters of the state

- Key fundamental: RCW 90.54.020(3) “The quality of the natural environment shall be protected and, where possible, enhanced”
- Eleven overall fundamentals



Water Resources Act (2)

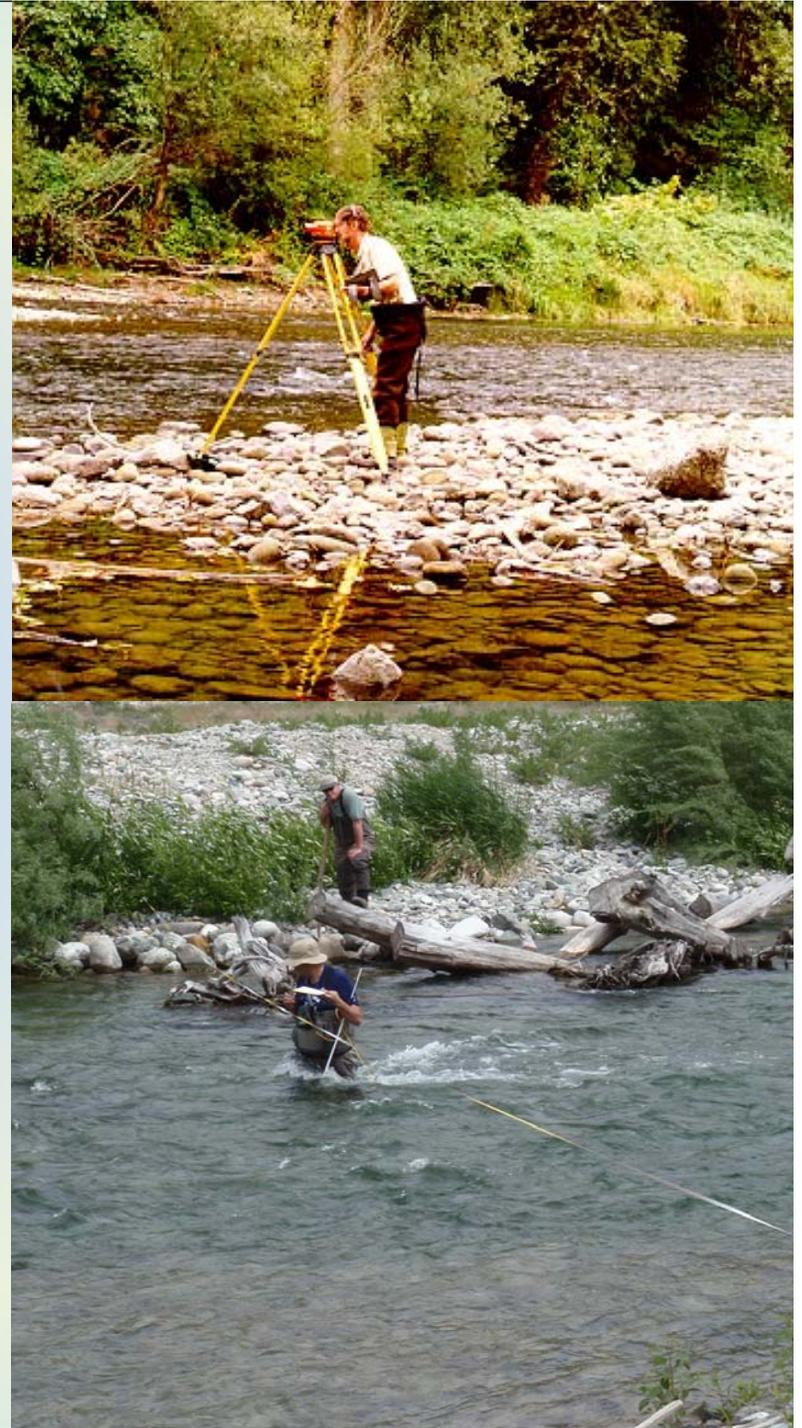
RCW 90.54.020(3)(a) Perennial rivers and streams of the state shall be retained with base flows necessary to provide for preservation of wildlife, fish, scenic, aesthetic and other environmental values, and navigational values. Lakes and ponds shall be retained substantially in their natural condition. **Withdrawals of water which would conflict therewith shall be authorized only in those situations where it is clear that overriding considerations of the public interest will be served.**

Instream Flow Science

- Instream flows are set based on technical methods (IFIM or toe width method), which model habitat at different flows
- We use the “best habitat flows” for species of concern
- In most watersheds in our state, using IFIM to set flows results in flow recommendations higher than average summer flows (so water is not available for new uses)

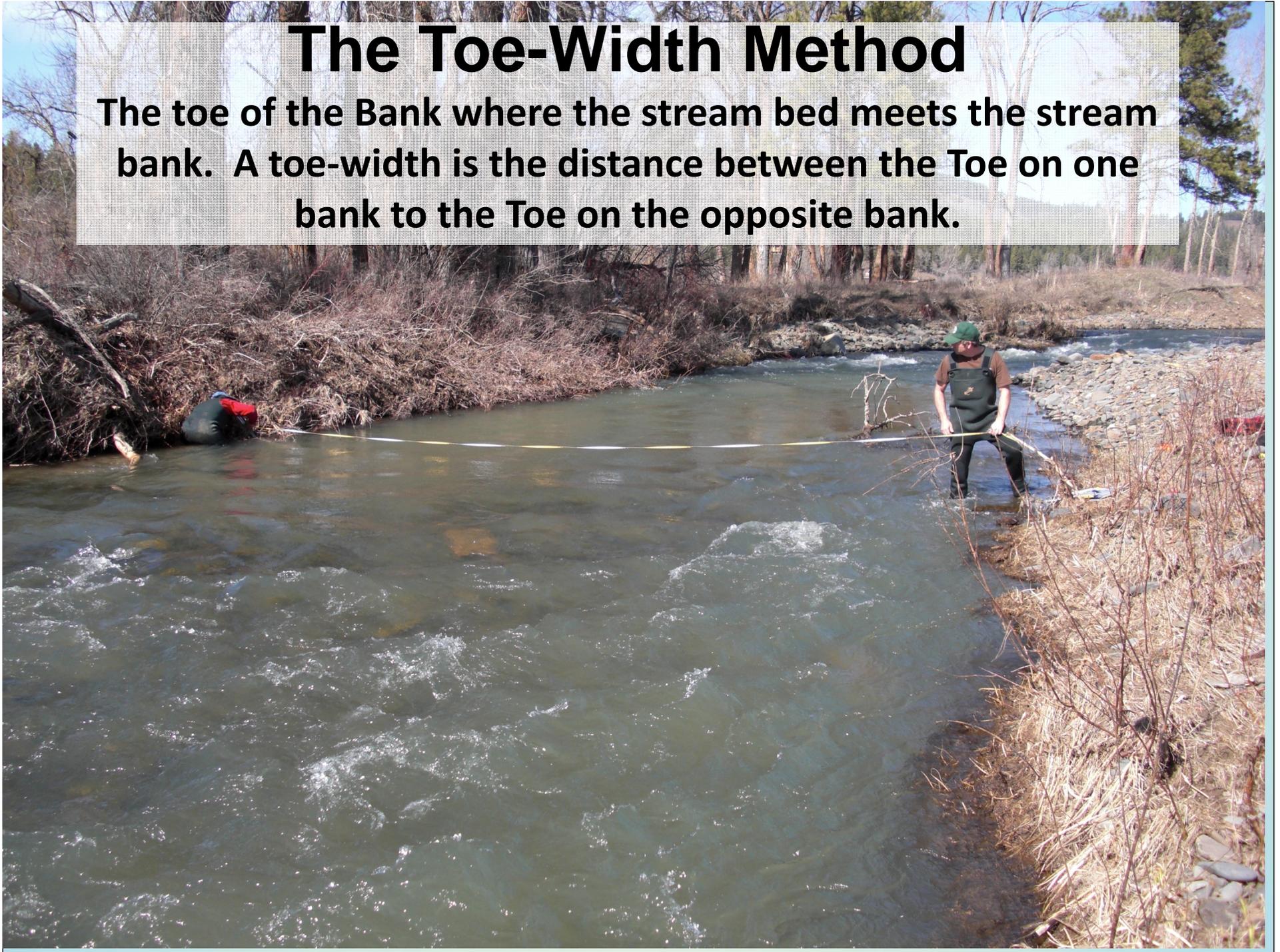
IFIM / PHABSIM

- Measure stream data along several cross-sections at low, medium, and high streamflows
- Uses a computer model to predict the amount of usable depths and velocities with suitable substrate or cover, at different streamflows.



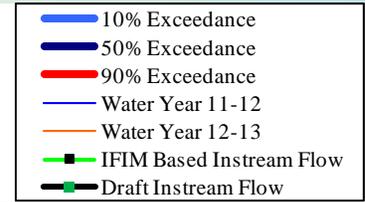
The Toe-Width Method

The toe of the Bank where the stream bed meets the stream bank. A toe-width is the distance between the Toe on one bank to the Toe on the opposite bank.

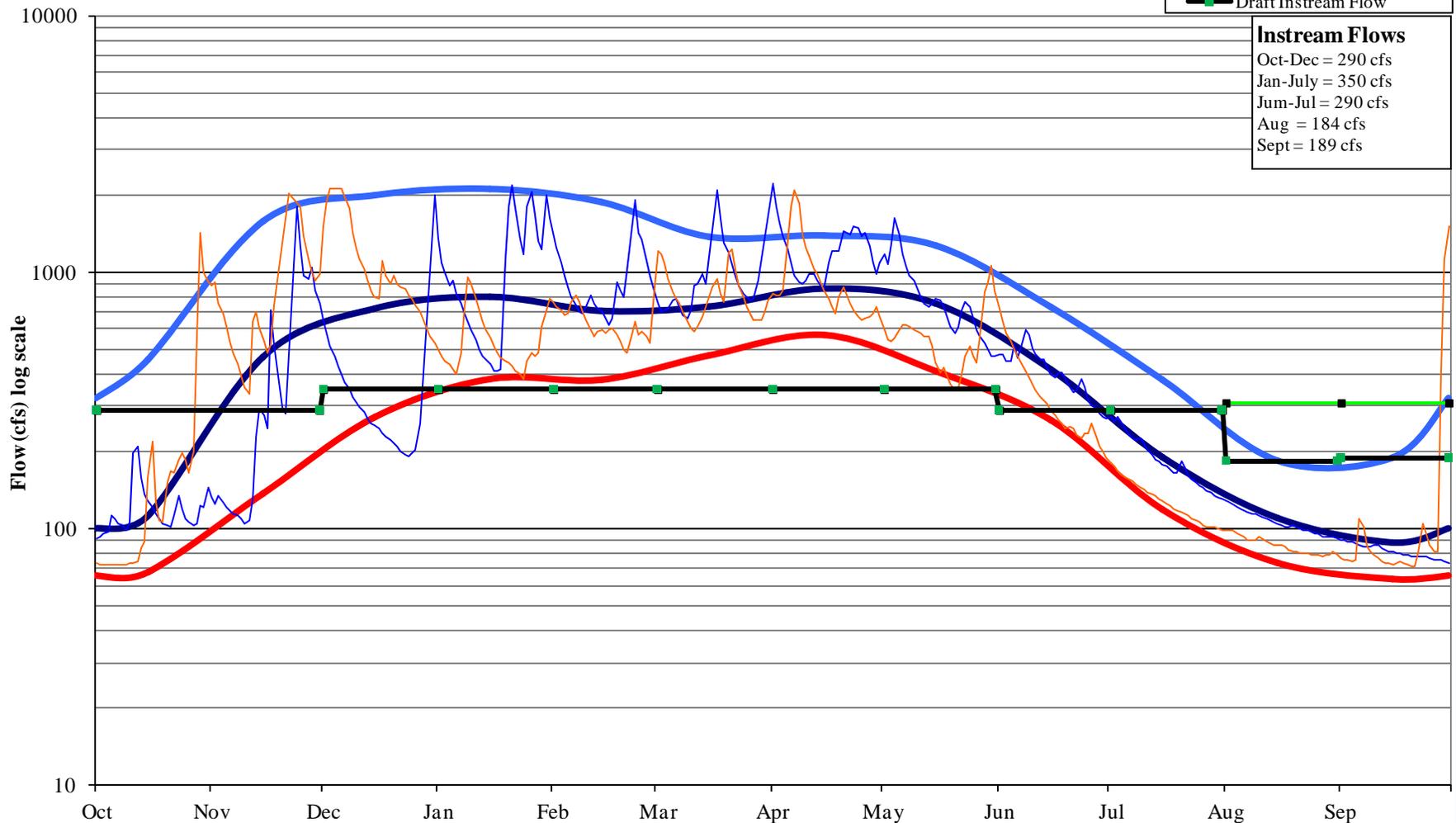


Outcome: ISF exceed summer flows

Wind River @ Stabler
Flow Exceedance Hydrographs and Historic Data
(Exceedance Hydrographs were Synthesized via Monthly Regression with Wind River RM 1.9 Daily Flows)



Instream Flows	
Oct-Dec	= 290 cfs
Jan-July	= 350 cfs
Jun-Jul	= 290 cfs
Aug	= 184 cfs
Sept	= 189 cfs



Watershed Planning Act

Legislature adopted the Watershed Planning Act in 1997

- “The legislature finds that the local development of watershed plans for managing water resources and for protecting existing water rights is vital to both state and local interests.”
- Overall goals to supply water in sufficient quantities for:
 - ✓ Residential, commercial, and industrial needs
 - ✓ Productive fish populations
 - ✓ Productive agriculture

Watershed Planning Act (2)

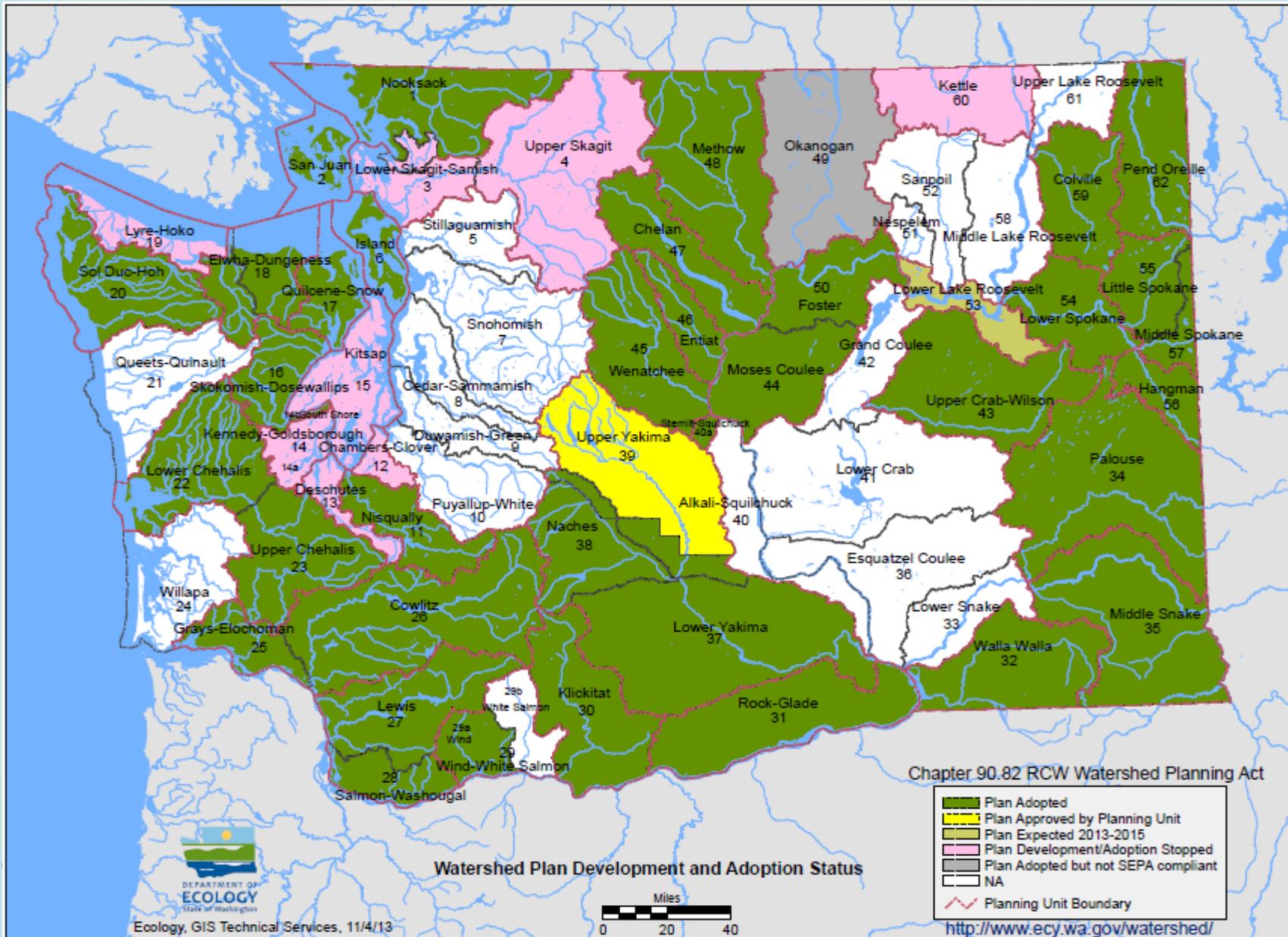
- Phase I – Organization
- Phase II – Assessment
 - ✓ Water quantity (required)
 - ✓ Water quality
 - ✓ Instream flow
 - ✓ Habitat
- Phase III – Implementation
- \$500,000 funding per WRIA



Watershed Planning Act (3)

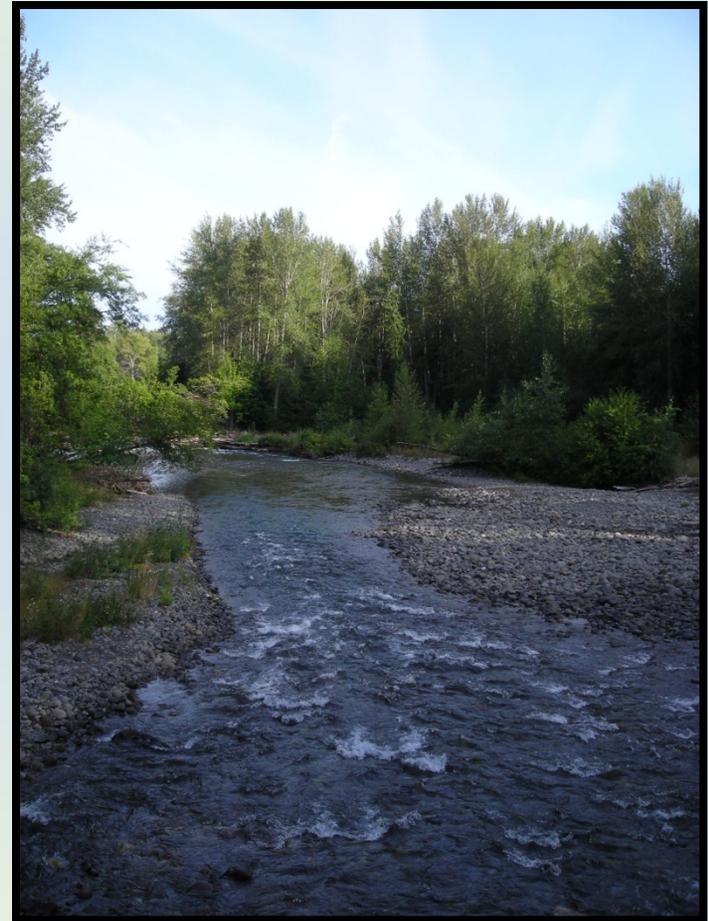
- Governments (including Tribes) and stakeholders must be invited
- Consistency with Comprehensive Plans, Water System Plans
- Approval by consensus (at least from participating governments)
- Signed by county commissioners in all affected counties; multi-WRIA plans approved by all

Watershed Plan Adoption Status (as of late 2013)



Successes: adopted plan and ISF rule

- Lewis and Salmon/Washougal (WRIA 27 & 28)
- Quilcene/Snow (WRIA 17)
- Entiat (WRIA 46)
- Dungeness (portion of WRIA 18), although under litigation currently
- Wenatchee (WRIA 45)



Challenge: *Swinomish v. Ecology* Decision

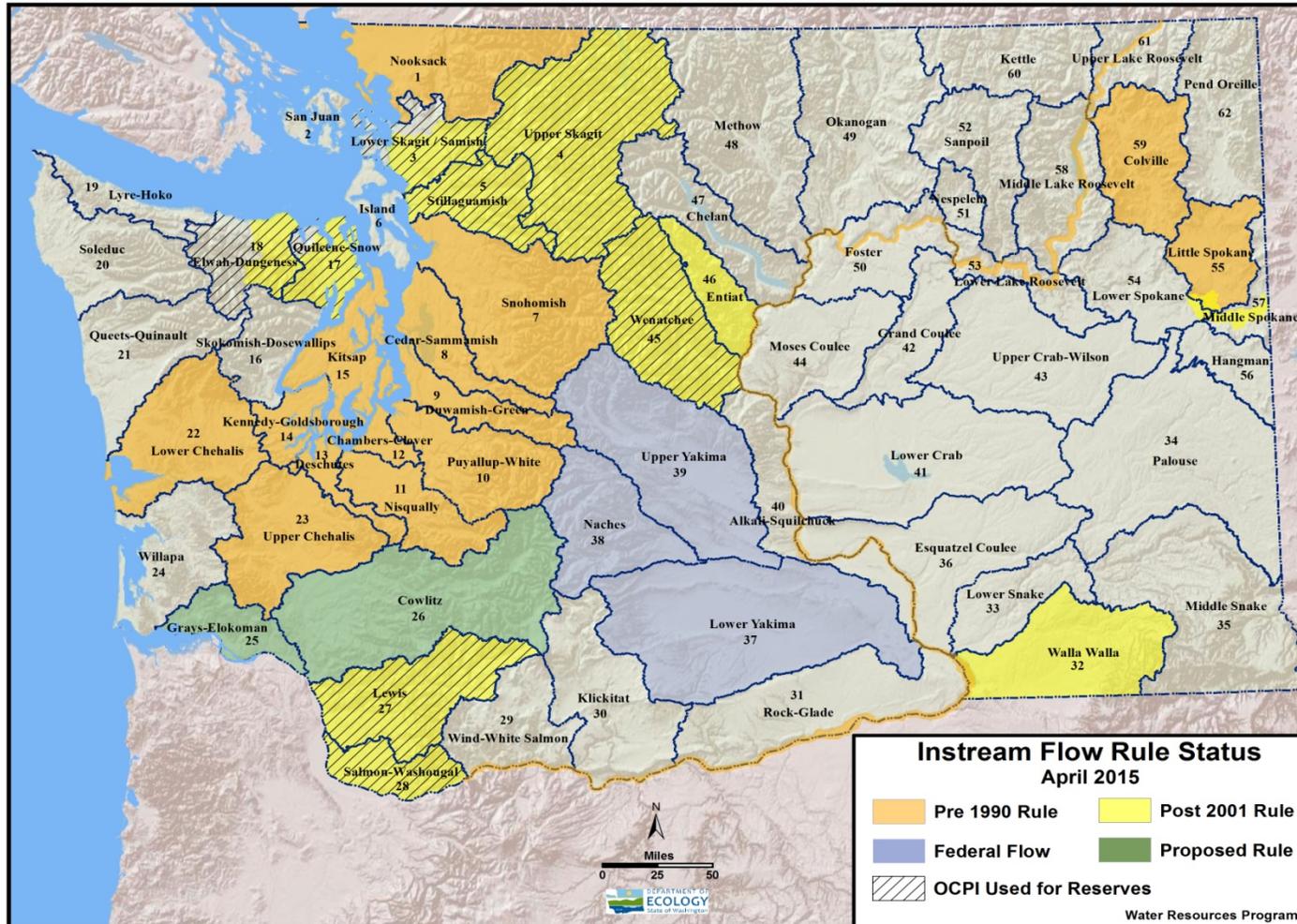
- In late 2013, the Supreme Court ruled that Ecology erred in its use of Overriding Consideration of the Public Interest (OCPI) in the Skagit instream flow (ISF) rule
- 2006 Skagit ISF Rule amendment invalidated
- 2001 ISF Rule reinstated



***Swinomish v. Ecology* Supreme Court decision (October 2013)**

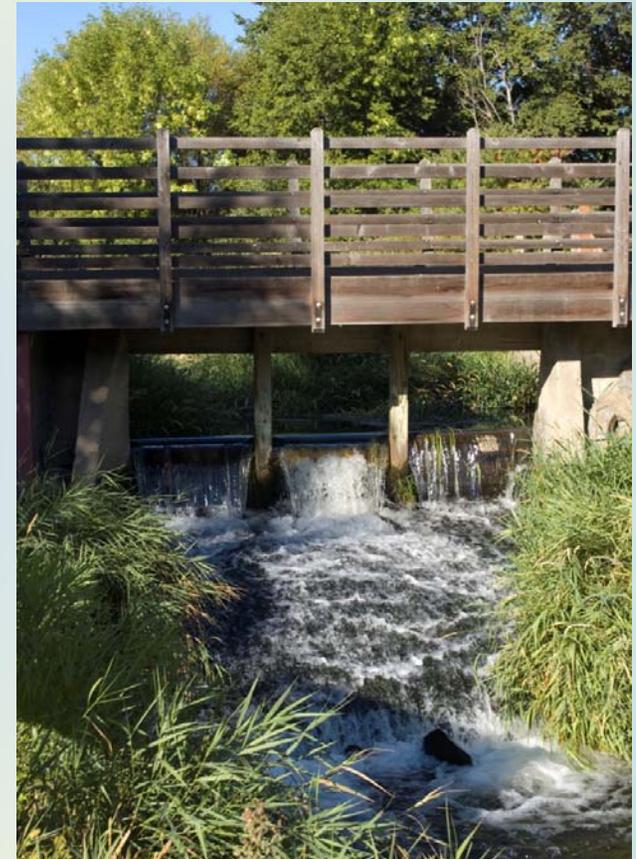
- “The OCPI exception is very narrow...and requires extraordinary circumstances before the minimum flow water right can be impaired.”
- OCPI is a public interest test, and not appropriate for private well uses
- Economic benefit of a new use doesn’t justify impairment of an existing use, including minimum flows set by rule

Use of OCPI in Instream Flow Rules



Implications in the Skagit Basin

- Immediate moratorium on new unmitigated uses of water – which continues today
- People who developed using reservation have uncertain legal water supply
- Creating mitigation banking structures throughout the watershed is difficult



What are we planning to do next?

- WRIAs which had planning units with adopted plans next up for ISF rules:
 - ✓ Cowlitz and Grays/Elochoman (WRIA 25 & 26)- approved W.S. plans
 - ✓ Middle Snake (WRIA 35)
- Proceeding with caution – how can new uses be allowed without OCPI when ISF levels aren't met?

Olympia Lacey Yelm: Complex Mitigation

- **Reclaimed water**– Lacey and Olympia constructed a reclaimed water facility to increase Woodland Creek flows; Yelm to infiltrate 56 AF/Year more at the existing Cochrane Park reclaimed water facility near Yelm Creek
- **Source substitution**– Olympia moved withdrawal from spring to a nearby well field, which increased McAllister Creek flow
- **Modeled all impacts**– Minimum flows in Nisqually were not affected (due to Alder Dam/Tacoma Power flow management)
- **Deschutes River** – Purchase and retire existing rights, and purchase farmland / improve habitat (out-of-kind mitigation)

Next Steps

- Began “Rural water solutions” workgroup with a goal (once again): how to balance instream and out of stream uses without OCPI tool?
- Not just a rural water issue... for the Wenatchee Rule (WRIA 45), we’ve stated that we will not issue permits out of the reservation
- We have said we need flexibility in mitigation because of stringent impairment standard established by the Supreme Court (*Postema*)

Thank you!



David Christensen
Program Development
Department of Ecology
360.407.6647

dave.christensen@ecy.wa.gov